

NEW SPECIES, VARIETIES AND COMBINATIONS FROM
THE HERBARIUM AND THE COLLECTIONS OF
THE ARNOLD ARBORETUM¹

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With plates 217 and 218

***Ostrya multinervis*, sp. nov.**

PLATE 217²

Arbor 16 m. alta, ramulis maturis purpureo-brunneis lenticellatis sparse adpresse pilosis; gemmae oblongo-ovoideae, 5–6 mm. longae, perulis striatis glabris. Folia oblongo-lanceolata, 8–12 cm. longa et 3–4.5 cm. lata, caudato-acuminata, basi rotundata vel late cuneata, argute et inaequaliter subsimpliciter serratis dentibus aristatis, supra pilis longis adpressis conspersa et in costa pubescentia, subtus in costa et venis sparse pilosa, ceterum fere glabra, venis lateralibus 18–20 inter se 3–4 mm. distantibus et trabeculis satis conspicuis conjunctis; petioli 5–7 mm. longi; sparse adpresse pilosi. Amenta mascula immatura, bracteis abrupte cuspidatis striatis ciliatis. Inflorescentia fructifera 4.5–6 cm. longa, densa, pedunculo sparse adpresse piloso 1.5–2 cm. longo; bractee utriculosae ellipticae, circiter 1.5 cm. longae, acutae, mucronatae, basi late cuneata setulosae, nervosae, sparsissime adpresse pilosae; nuculae anguste ovoideae, compressae, 6–7 mm. longae et 3–3.5 mm. latae, levissime striatae, apice ciliatae, pallide brunneae.

CHINA. H u n a n : Ma-ling-tung, Sinning Hsien, in mixed forest on slope, alt. 650 m., *C. S. Fan & Y. Y. Li, no. 605*, Oct. 13, 1935 (type).

This species differs from the other Asiatic species of the genus in the more numerous and closer veins of the generally narrow and caudate-acuminate leaves. In the shape of its fruiting bracts and inflorescence it resembles *O. japonica* Sarg. but differs besides in the more numerous veins, in the nearly simple and closer serration of the nearly glabrous leaves and the stouter and shorter peduncle. Besides in the leaves it differs from *O. Liana* Hu in the larger and closely imbricate fruiting bracts and from *O. Rehderiana* Chun in the broad-cuneate, not stipitate, base of the fruiting bracts and the shorter and broader nutlet.

¹Continued from vol. 14: 350.

²Plate 217. *Ostrya multinervis* Rehd. Holotype; $\times 2/5$. Bracts and nutlets; $\times 2$.

Betula mandshurica (Regel) Nakai in Bot. Mag. Tokyo, **29**: 42 (1915); Fl. Sylv. Kor. **2**: 27, t. 14 (1915).

Betula alba L. subsp. *mandshurica* Regel in Bull. Soc. Nat. Moscou, **38**²: 399, t. 7, fig. 15 (1865); in DeCandolle, Prodr. **16**²: 165 (1868).

Betula latifolia sensu Komarov in Act. Hort. Petrop. **22**: 38 (Fl. Mansh. II) (1903), pro parte, non Tausch.

Betula japonica Sieb. var. *a. mandshurica* (Regel) H. Winkler in Engler, Pflanzenr. IV. **61** (Heft 19): 78 (1904). — Nakai in Jour. Coll. Sci. Tokyo, **31**: 202 (Fl. Kor. II) (1911).

As *Betula japonica* Sieb. ex Winkl. is invalidated by *B. japonica* Thunb.¹ which is a synonym of *Alnus japonica* (Thunb.) Sieb. & Zucc., and *Betula latifolia* of Komarov is a misapplication of the name *B. latifolia* Tausch, which is a synonym of *B. papyrifera* Marsh., the next oldest binomial available is *B. mandshurica* (Reg.) Nakai, thus *B. mandshurica* becomes the type of the species concept called generally *B. japonica* Sieb. and *B. japonica* becomes a variety. From var. *japonica* typical *B. mandshurica* differs chiefly in the glabrous or less pubescent leaves only slightly or scarcely bearded in the axils of the veins beneath and broad cuneate to truncate at base.

Betula mandshurica* var. *japonica (Miq.), comb. nov.

Betula japonica Siebold in Verh. Bat. Genootsch. **12**: 25 (Syn. Pl. Oec. Jap.) (1830), nom. nud. — Siebold & Zuccarini in Abh. Akad. Münch. **4**³: 229 (Fl. Jap. Fam. Nat. **1**: 105) (1846), nom. nud. — Winkler in Engler, Pflanzenr. IV. **61** (Heft 19): 78 (1904), quoad var. *β*. — Nakai in Bot. Mag. Tokyo, **29**: 42 (1915). — Schneider in Sargent, Pl. Wilson. **2**: 485 (1916). — Rehder, Man. Cult. Trees Shrubs, 140 (1927). — Non *B. japonica* Thunb.

Betula alba var. *japonica* Miquel in Ann. Mus. Bot. Lugd.-Bat. **2**: 136 (Prol. Fl. Jap. 68) (1865).

Betula alba subsp. *B. latifolia a. Tauschi* Regel in Bull. Soc. Bot. Nat. Moscou, **38**²: 399, t. 7, fig. 11–14 (1865); in DeCandolle, Prodr. **16**²: 165 (1868); non *B. latifolia* Tausch.

Betula alba var. *Tauschii* (Reg.) Shirai in Bot. Mag. Tokyo, **8**: 319 (1894).

Betula pendula var. *japonica* Rehder in Bailey, Cycl. Am. Hort. **1**: 159 (1900). — Schneider, Ill. Handb. Laubholz. **1**: 112, fig. 62q¹⁻³ (1904).

Betula pendula var. *Tauschii* Winkler in Engler, Pflanzenr. IV, **61** (Heft 19): 78 (1904). — Nakai in Jour. Coll. Sci. Tokyo, **31**: 202 (Fl. Kor. II) (1911).

Betula japonica var. *ε pluricostata* Winkler in Engler, Pflanzenr. IV. **61** (Heft 19): 79 (1904).

Betula alba L. var. *vulgaris* sensu Shirasawa, Icon. Ess. For. Jap. **2**: t. 11 (1908), non Spach.

¹*Betula japonica* Thunberg in Nov. Act. Soc. Sci. Upsal. **6**: 45, t. 4 (1799).

Betula verrucosa var. *japonica* Henry in Elwes & Henry, Trees Gt. Brit. Irel. 4: 967 (1909).

Betula pendula var. *Tauschii* Rehder in Bailey, Stand. Cycl. Hort. 1: 498 (1914).

For additional synonyms see Schneider in Sargent, Pl. Wilson. 2: 485-486.

Winkler (l. c.), Schneider (l. c.) and other authors include under the name *B. japonica* all the varieties enumerated here under *B. mandshurica*. Nakai (in Bot. Mag. Tokyo, 29: 42) keeps *B. mandshurica* and *B. japonica* as distinct species and refers var. *kamschatica* as a synonym to *B. japonica*. Both varieties, var. *japonica* and var. *kamtschatica* are common in Japan.

From the type the var. *japonica* differs in the more or less pubescent leaves distinctly bearded in the axils beneath and usually truncate to subcordate at the base.

***Betula mandshurica* var. *kamtschatica* (Regel), comb. nov.**

Betula alba subsp. 4. *B. latifolia* Tausch, β . *kamtschatica* Regel in Bull. Soc. Nat. Moscou, 38²: 400, t. 7, fig. 16-20 (1865); in DeCandolle, Prodr. 16²: 165 (1868) "subsp. iv, *latifolia*."

Betula pendula var. *japonica* f. *typica* Schneider in Ill. Handb. Laubholz. 1: 113, fig. 628² (1904).

Betula alba subsp. 1. *B. verrucosa* var. *resinifera* Regel in Bull. Soc. Nat. Moscou, 38²: 398 (1865); in DeCandolle, Prodr. 16²: 164 (1868) "subsp. I, *verrucosa* δ . *resinifera*," pro parte.

Betula japonica var. *resinifera* (Regel) Winkler in Engler, Pflanzenr. IV. 61 (Heft 19): 79 (1904).

Betula japonica var. γ . *camtschatica* (Regel) Winkler in Engler, Pflanzenr. IV. 61 (Heft 19): 79 (1904). — Schneider in Sargent, Pl. Wilson. 2: 486 (1916) "*kamtschatica*."

Betula alba var. *vulgaris* sensu Shirasawa, Icon. Ess. For. Jap. 2: t. 11, fig. 19-37 (1908), non Spach (1841).

Betula japonica var. *sachalinensis* Koidzumi in Bot. Mag. Tokyo, 27: 563 (1913). — Matsumura, Ic. Pl. Koisikav. 2: 39, t. 104 (1914).

This variety is very closely related to var. *japonica* and differs chiefly in the usually thinner leaves truncate or broad-cuneate at the base, more sharply doubly serrate and often slightly lobulate, glabrous or sometimes slightly pilose and with small axillary tufts of hairs beneath.

***Betula mandshurica* var. *szechuanica* (Schneid.), comb. nov.**

Betula alba var. *vulgaris* Franchet in Jour. de Bot. 16: 406 (1899). — Burkill in Jour. Linn. Soc. 26: 497 (Ind. Fl. Sin. 2) (1899). — Non Spach.

Betula japonica var. *mandshurica* sensu Schneider in Sargent, Pl. Wilson. 2: 461 (1916), non *B. alba* subsp. *mandshurica* Regel.

Betula japonica var. *szechuanica* Schneider in Sargent, Pl. Wilson. 3: 454 (1917). — Rehder in Jour. Arnold Arb. 9: 24 (1928).

This variety differs in its rhombic-ovate or triangular-ovate larger leaves, truncate or broad-cuneate at base, unequally dentate-serrate, densely glandular-punctate beneath and glabrous, dark dull green above. It occurs in western China and forms a tree with wide-spreading branches.

Betula mandshurica var. **Rockii** (Rehd.), comb. nov.

Betula japonica var. *Rockii* Rehder in Jour. Arnold Arb. 9: 25 (1928).

This form is known only from the Kokonor region and thus marks the northwestern limit of the range of the species. It is close to var. *szechuanica* but differs chiefly in its much smaller, cuneate, doubly serrate or even lobulate leaves and the suberect or ascending lateral lobes of the fruiting bract. In shape the leaves resemble those of *B. pendula* Roth, but the fruiting bracts are quite different.

Sorbaria tomentosa (Lindl.), comb. nov.

Spiraea Lindleyana Wallich, Num. List, no. 703 (1828), nom. nud. — Royle, Ill. Him. Bot. 203 (1839), nom. nud. — Lindley in Bot. Reg. 31: t. 33 (1845).

Schizonotus tomentosus Lindley in Bot. Reg. 26: Misc., p. 71 (1840).

Spiraea sorbifolia L. δ . *Lindleyana* (Wall.) K. Koch, Hort. Dendr. 108 (1853).

Spiraea sorbifolia sensu Hooker f., Fl. Brit. India, 2: 324 (1878), non Linnaeus.

Sorbaria Lindleyana (Lindl.) Maximowicz in Act. Hort. Petrop. 6: 224 (1879). — Dippel, Handb. Laubholz. 3: 503 (1893). — Schneider, Ill. Handb. Laubholz. 1: 490, fig. 297, i-k, 299a (1905). — Rehder, Man. Cult. Trees Shrubs, 349 (1927).

Basilima Lindleyana (Wall.) Kuntze, Rev. Gen. 1: 215 (1891). — Koehne, Deutsch. Dendr. 223 (1893).

Schizonotus Lindleyanus Nash in Jour. New York Bot. Gard. 19: 141 (1918).

Though Lindley in 1840 (l. c.) cites as a synonym *Spiraea Lindleyana* Wall., a nomen nudum, his remarks show clearly that he was referring to the briefly characterized Himalayan representative of *Spiraea sorbifolia*. At the same time he gave a brief description of the distinguishing characters of the genus *Schizonotus* published as a nomen nudum in 1828 (in Wallich, Num. List, no. 703).

Aronia prunifolia (Marsh.), comb. nov.

Mespilus prunifolia Marshall, Arbust. Am. 90 (1785).

Pyrus floribunda Lindley in Bot. Reg. 12: t. 1006 (1826).

Aronia (*Pyrus*) *floribunda* (Lindl.) Spach, Hist. Veg. 2: 89 (1834). — Rehder in Jour. Arnold Arb. 2: 44 (1920).

Sorbus floribunda Heynhold, Nomencl. Bot. 773 (1840).

Aronia atropurpurea Britton, Man. 517 (1901); in *Addisonia*, 3: 1, t. 81 (1918).

Pyrus arbutifolia var. *atropurpurea* (Britt.) Robinson in *Rhodora*, 10: 33 (1908).

Adenorachis atropurpurea (Robins.) Nieuwland in *Am. Midl. Nat.* 4: 94 (1915).

Pyrus atropurpurea (Britt.) Bailey in *Rhodora*, 18: 154 (1916).

Pyrus melanocarpa var. *atropurpurea* (Britt.) Farwell in *Rep. Mich. Acad. Sci.* 19: 258 (1917).

For further synonymy see Rehder (l. c.) under *Aronia floribunda*.

Mespilus prunifolia Marsh. has apparently been confused by most authors with *M. prunifolia* Lam. (*Encycl. Méth.* 4: 443. 1798) which is a species of *Crataegus*, and therefore its real identity has not been recognized, but Marshall's description leaves no doubt that he intended to describe the shrub now usually called *Aronia atropurpurea* or *A. floribunda*. In his *Arbustrum Americanum*, p. 90-91, he describes three species of unarmed *Mespilus*; the first, *M. nivea*, is a synonym of *Amelanchier canadensis* (L.) Med.; the second is the species under discussion; the third, *M. canadensis*, is identical with *Aronia arbutifolia* (L.) Elliott. Owing to a garbled translation of the original text in the French translation (*Cat. Alfab. Arb. Arbriss.* 140. 1788) Nieuwland (in *Am. Midl. Naturalist*, 12: 122. 1930) identified it with *Pyrus melanocarpa* (Michx.) Willd. and made the combination *Pyrus canadensis* (Marsh.) Nieuwl., because *Mespilus canadensis* has priority over *P. melanocarpa* (Michx.) Willd. (1809), but *Pyrus canadensis* (Marsh.) Nieuwl. is referable, as to the name-bringing synonym, to *A. arbutifolia*, and only as to Nieuwland's description based on a misidentification, to *A. melanocarpa*. The original description reads in part: "much resembling the last described [*M. prunifolia*], except in having fruit of a red colour when ripe. There is also a variety of this of smaller growth which produces fruit of a beautiful red colour." In the French translation the corresponding sentences read: "qui ressemble beaucoup au précédent. Ses feuilles sont rouges on en trouve une variété qui est encore plus petite." There is no mention of the color of the fruit in this translation, which misled Nieuwland to assume that the color is black, though the English name of the species is given as "Dwarf red fruited Medlar" and the description says that it much resembles the preceding [*M. prunifolia*] which is described as having the leaves "cotonneuses" beneath.

Evonymus Fortunei (Turcz.) Handel-Mazzetti, *Symb. Sin.* 7: 660 (1933), syn. *E. kiautschovia* et var. et specim. cit. exclud.

PLATE 218¹

¹*Evonymus Fortunei* (Turcz.) Hand.-Mazz. Isotype of *Elaeodendron Fortunei* Turcz. in *Herb. Kew*; × 2/5.

Elaeodendron Fortunei Turczaninow in Bull. Soc. Nat. Moscou, **36**¹: 603 (1863). — Walpers Ann. **7**: 582 (1868). — Maximowicz in Bull. Acad. Sci. St. Pétersb. **27**: 460 (in Mel. Biol. **11**: 205) (1882). — Hemsley in Jour. Linn. Soc. Bot. **23**: 124 (1886).

Evonymus japonica Thunb. var. *acuta* Rehder in Sargent, Pl. Wilson. **1**: 485 (1913).

Evonymus radicans Sieb. var. *acuta* Rehder in Mitt. Deutsch. Dendr. Ges. **22**: 257 (1913); Man. Cult. Trees Shrubs, 552 (1927).

Elaeodendron Fortunei had been already identified with *Evonymus radicans* var. *acuta* by Dr. E. D. Merrill in connection with his study of *Microtropis*. A note by Dunn under *Microtropis reticulata* in Jour. Bot. **47**: 376 (1909) referring to *Elaeodendron Fortunei* as possibly belonging to *Microtropis* induced him to examine an isotype of Turczaninow's species in the Kew herbarium (Fortune, 946, China, 1845) which he found to be identical with *Evonymus radicans* var. *acuta*. Handel-Mazzetti in 1933 (l. c.) had transferred *Elaeodendron Fortunei* to *Evonymus*, but had identified it with *E. kiautschovica* Loes. and had made *E. patens* Rehd. a variety of *E. Fortunei* (Turcz.). From *E. kiautschovica*, however, it is easily distinguished by its compact inflorescence, the secondary axes of the cyme not exceeding 6 mm., and by the elliptic or oblong-elliptic acute leaves of firmer texture, while *E. kiautschovica* has a loose inflorescence with the secondary axes up to 16 mm. long, obovate or obovate-oblong leaves, abruptly acuminate or sometimes obtuse or rounded at apex, gradually narrowed into the petiole and at least in the var. *patens* (Rehd.) Loes. of thinner texture and only half-evergreen.¹ The isotype of *Elaeodendron Fortunei* from Kew before me agrees exactly with the flowering isotypes of *E. japonica* var. *acuta* (Wilson, nos. 562 and Veitch Expedition no. 1227) except that the leaves in Fortune's specimen are generally somewhat narrower. Fortune's specimen was probably collected either in Kiangsu or Chekiang where he spent the spring of 1845; from both these provinces and also from Anhwei we have in this herbarium many specimens of *E. radicans* var. *acuta*. Turczaninow gives northern China as the habitat of *Elaeodendron Fortunei*, but Fortune's label reads simply "China" and what Fortune calls the north of China is the region around Ningpo and Shanghai.²

Typical *Eonymus Fortunei* is widely distributed throughout eastern,

¹Through the kindness of Dr. L. Diels, Director of the Botanical Museum at Berlin-Dahlem, I received recently a photograph of the type of *Evonymus kiautschovica* Loes. which shows that there is apparently no difference between the type and var. *patens* (*E. patens* Rehd.).

²See p. 346 of his "Three years wanderings in the northern provinces of China. London, 1847."

central and western China; in this herbarium it is represented from the provinces of Shantung (cultivated), Kiangsu, Chekiang, Anhwei, Kwangsi, Yunnan, Hupeh, Honan, Shensi and Shansi. In Japan and Korea the species is represented by the following varieties including some garden forms; there is also the following slight form of the type known only in cultivation.

Evonymus Fortunei f. *colorata* (Rehd.), comb. nov.

Evonymus radicans var. *acuta* f. *colorata* Rehder in Jour. Arnold Arb. 7: 30 (1926).

Evonymus radicans var. *colorata* (Rehd.) Rehder in Man. Cult. Trees Shrubs, 552 (1927).

This form was raised from seed collected in Shensi by F. N. Meyer and differs only in the leaves assuming in autumn a purple color retained during the winter, a very dark deep purple on the upper and a brighter and lighter purple on the lower surface.

Evonymus Fortunei var. *alticola* (Hand.-Mazz.), comb. nov.

Evonymus radicans (Miq.) Sieb. var. *alticola* Handel-Mazzetti, Symb. Sin. 7: 660 (1933).

This variety occurs in Yunnan and differs from the type chiefly in its most elliptic-obovate to oblong-obovate leaves, abruptly acuminate, minutely serrulate to entire or nearly entire, often glaucous above the second year, and in its very dense small cymes 7–10 mm. across. Besides the specimens listed Simeon Ten's specimen from Tchao-tong (Arn. Arb. distr. 491) belongs here.

Evonymus Fortunei var. *radicans* (Miq.), comb. nov.

Evonymus gracilis Siebold, Cat. Rais. Pl. Jap. Chine, 33 (1863)¹ nom. nud. — K. Koch, Dendr. 1: 632 (1869), nom. nud.

Evonymus radicans Sieb. ex Siebold, l. c. (1863) pro synonym. praeced. — Miquel in Ann. Mus. Bot. Lugd.-Bat. 2: 86 (Prol. Fl. Jap. 18) (1865), pro synonym. *E. japonici* var. *radicantis*.

Evonymus japonicus var. β . *radicans* Miquel in Ann. Mus. Bot. Lugd.-Bat. 2: 86 (Prol. Fl. Jap. 18) (1865). — Maximowicz in Mém. Biol. 11: 178 (1881); in Bull. Acad. Sci. St. Pétersb. 27: 441 (1882). — Dippel, Handb. Laubholz. 2: 495 (1892). — Nakai in Jour. Coll. Sci. Tokyo, 26, 1: 123 (Fl. Kor. I) (1908). — Matsumura, Ind. Pl. Jap. 2: 321 (1912). — Makino & Tanaka, Man. Fl. Nippon, 328 (1927).

Evonymus radicans Sieb. ex Miquel in Ann. Mus. Bot. Lugd.-Bat. 3: 202 (Prol. Fl. Jap. 366) (1867). — Franchet & Savatier, Enum. Pl. Jap. 1: 79 (1875). — Anon. in Bull. Féd. Soc. Hort. Belg. 1883–85: 269

¹I am indebted to Dr. H. J. Lam, Director of the Rijksherbarium at Leiden, for a copy of Siebold's Catalogue of 1863 and for the information that in none of the catalogues in the library of that institution issued between 1844 and 1871 are descriptions of new species given.

(1887). — Rehder in Bailey, Cycl. Am. Hort. 2: 559 (1900); in Sargent, Trees Shrubs, 1: 129 (1903); Man. Cult. Trees Shrubs, 552 (1927). — Schneider, Ill. Handb. Laubholz. 2: 173, fig. 112p-q, 114e (1907). — Bean, Trees Shrubs Brit. Isl. 1: 542 (1914).

Evonymus japonicus μ . *radicans viridis* Regel, Ind. Sem. Hort. Bot. Petrop. 1866: 103 (1867).

Evonymus repens Carrière in Rev. Hort. 1885: 296, fig. 51.

Evonymus japonica β . *gracilis* Koehne, Deutsch. Dendr. 363 (1893), not Regel.

Evonymus radicans var. *viridis* Rgl. ex Schneider, Ill. Handb. Laubholz. 2: 173 (1907).

This variety occurs in central Japan and in southern Korea. It differs from the Chinese type chiefly in the usually smaller and less pointed leaves, more distinctly and sharply serrate, in their thicker texture and obsolete lateral veins. It is much cultivated in Japan and has produced a number of forms in Japanese and European gardens.

***Evonymus Fortunei* var. *radicans* f. *reticulata* (Reg.), comb. nov.**

Evonymus japonicus λ *reticulatus* Regel, Ind. Sem. Hort. Bot. Petrop. 1866: 102 (1867).

Evonymus gracilis h. Sieb. ex Regel, l. c. (1867), pro syn. praeced.

Evonymus radicans var. *reticulatus* Rgl. ex Rehder in Bailey, Cycl. Am. Hort. 2: 559 (1900); in Bailey, Stand. Cycl. Hort. 3: 1188 (1914).

Evonymus radicans var. *viridis* Rgl. f. *reticulata* Schneider, Ill. Handb. Laubholz. 2: 173 (1907).

Evonymus radicans var. *picta* Jacob Makoy ex Rehder, Man. Cult. Trees Shrubs, 552 (1927).

This form differs from typical var. *radicans* in the leaves being variegated with white along the veins.

***Evonymus Fortunei* var. *radicans* f. *gracilis* (Reg.), comb. nov.**

Evonymus japonicus δ *gracilis* Regel, Ind. Hort. Bot. Petrop. 1866: 103 (1867).

Evonymus gracilis argenteo-variegatus h. Sieb. ex Regel, l. c. (1867), pro syn. preced. — Spaeth, Spaeth-Buch, 171 (1920) as *argentei-variegata*.

Evonymus gracilis roseo-variegatus h. Sieb. ex Regel, l. c. (1867), pro syn. preced.

Evonymus radicans variegata Carrière in Rev. Hort. 1876: 354, fig. 75-77.

Evonymus radicans var. *viridis* Rgl. f. *gracilis* Schneider, Ill. Handb. Laubholz. 2: 173 (1907).

Evonymus radicans var. *argenteo-marginatus* Rehder in Bailey, Cycl. Am. Hort. 2: 559 (1900); Man. Cult. Trees Shrubs, 552 (1927).

To this form may be referred the following variegated forms:

Leaves dark green variegated with golden-yellow:

Evonymus radicans pictus J. Makoy et Cie. in Belg. Hort. 15: 146 (1865).

Leaves variegated with pink on the margin:

Evonymus japonicus ι . *radicans* Regel, Ind. Sem. Hort. Bot. Petrop, 1866: 103 (1867), not *E. japonicus* var. *radicans* Miq.

Evonymus radicans roseo-marginatus h. Jacob Makoy et Cie. ex Regel, l. c. (1867), pro syn. preced. — Rehder in Bailey, Cycl. Am. Hort. 2: 559 (1900), pro var.; Man. Cult. Trees Shrubs, 552 (1927), pro var.

Evonymus radicans var. *viridis* Rgl. f. *roseo-marginata* Schneider, Ill. Handb. Laubholz. 2: 173 (1907).

Leaves variegated with white, yellow and bright green:

Evonymus japonicus κ . *tricolor* Regel, Ind. Sem. Hort. Bot. Petrop. 1866: 103 (1867).

Evonymus tricolor Jacob Makoy et Cie. ex Regel, l. c. (1867), pro synonym. preced.¹

Evonymus radicans pictus h. Lambertianus ex Regel, l. c. (1867), pro synonym. preced.

All these variegated forms are rather inconstant and variable and do not seem to be at present in cultivation as distinct forms under their various names.

Evonymus Fortunei var. *radicans* f. *minima* (Simon Louis), comb. nov.

Evonymus radicans minimus Simon-Louis, Cat. 1912-13: 43 (1912), vel prius.

Evonymus radicans var. *minima* Simon-Louis ex Rehder in Bailey Stand. Cycl. Hort. 2: 1188 (1914).

Evonymus radicans var. *kewensis* Hort. ex Bean, Trees Shrubs Hardy Brit. Isles, 1: 542 (1914).

This form is known only as a sterile plant of creeping habit and differs in its very small leaves 0.6–1.5 cm. long. It is probably the same form mentioned as *E. radicans fol. minimis* in Vilmorin & Bois, Frutic. Vilmor. 34 (1904), nom. nud. The form cultivated as var. *kewensis* has generally smaller leaves than the plant grown as f. *minima*; it was introduced, according to Bean, by Professor C. S. Sargent from Japan and sent to Kew in 1893.

Evonymus Fortunei var. *radicans* f. **Carrierei** (Vauvel), comb. nov.

Evonymus Carrierei Vauvel in Vulgaris. Hort. 1881, no. 6. — Carrière in Rev. Hort. 1881: 373, fig. 92; 1885: 295, fig. 50.

Evonymus japonicus var. *gracilis* Dippel, Handb. Laubholz. 2: 495 (1892), pro parte.

Evonymus japonicus Carrierei Mottet, Dict. Prat. Hort. Jard. 2: 351 (1894).

¹In a list of new varieties offered by Jacob Makoy et Cie., no *E. tricolor* is listed, but a *E. japonicus tricolor* (in Belg. Hort. 15: 145) which probably does not belong to *E. radicans* since *E. japonicus* is being kept distinct from *E. radicans*.

Evonymus radicans var. *Carrierei* Nicholson in Hand-list Trees Shrubs Kew, **1**: 67 (1894). — Mouillefert, *Traité Arb. Arbriss.* 752 (1895). — Schneider, *Ill. Handb. Laubholz.* **2**: 173 (1907). — Rehder in Bailey, *Stand. Cycl. Hort.* **2**: 1188 (1914); *Man. Cult. Trees Shrubs*, 552 (1927).

This form differs in its shrubby, not climbing habit forming a low spreading shrub and in its elliptic to elliptic-oblong leaves, lustrous dark green above and up to 5 cm. long. It flowers and fruits profusely and sometimes develops branches with leaves broadly margined with white. The form known as "Silver Queen" belongs probably here.

Evonymus Fortunei var. *vegeta* (Rehd.), comb. nov.

Evonymus radicans var. *vegetus* Rehder in Sargent, *Trees & Shrubs*, **1**: 129, t. 65 (1903); *Man. Cult. Trees Shrubs*, 552 (1927). — Schneider, *Ill. Handb. Laubholz.* **2**: 173 (1907). — Wilson in *Hortic. Boston*, n. ser. **4**: 530, fig. (1926).

This variety occurs spontaneously in Hokkaido and Hondo (Mt. Kirishima, Kyushu, *Z. Tashiro*, July 21, 1917). It differs in its more coriaceous, orbicular-oval to broad-elliptic, coarsely crenate leaves 2.5–5 cm. long and 2–3.5 cm. broad, also in the larger inflorescence with the secondary axes sometimes 1–1.5 cm. long. It may remain a low-spreading shrub flowering and fruiting profusely, but climbs with rootlets, if it finds suitable support.

Acer Mono Maximowicz in *Bull. Phys. Math. Acad. Sci. St. Pétersb.* **15**: 126 (*Mél. Biol.* **2**: 416) (1857).

Acer pictum Thunberg, *Fl. Jap.* 162 (1784), sensu lato. — Siebold & Zuccarini in *Abh. Akad. Wiss. Muench.* **4**²: 156 (*Fl. Jap. Fam. Nat.* **1**: 48) (1844). — Non Thunberg 1783.

Acer laetum var. *parviflorum* Regel in *Bull. Acad. Sci. St. Pétersb.* **15**: 219 (*Mél. Biol.* **2**: 486) (1857).

Acer pictum γ . Maximowicz in *Bull. Acad. Sci. St. Pétersb.* **26**: 443 (*Mél. Biol.* **10**: 600) (1880).

Acer pictum var. *Mono* Pax in *Bot. Jahrb.* **7**: 236 (1886).

Acer pictum var. *a. typicum* Schwerin subvar. *2. mono* (Maxim.) Pax in Engler, *Pflanzenr.* (Heft 8) IV. **163**: 47 (1902).

Acer Hayatae var. *glabra* Léveillé & Vaniot in *Bull. Soc. Bot. France*, **53**: 590 (1906), syn. ex Rehder in *Jour. Arnold Arb.* **15**: 5 (1934).

Acer pictum var. *parviflorum* (Reg.) Schneider, *Ill. Handb. Laubholz.* **2**: 225 (1907).

As Nakai has shown (in *Bot. Mag. Tokyo*, **45**: 124–126, 1931), the name *Acer pictum* under which this species has been generally known is invalidated by *A. pictum* Thunberg of 1783 (in *Nov. Act. Soc. Sci. Upsal.* **4**: 40) which is not an *Acer*, but belongs to the Araliaceae and is *Kalopanax pictus* (Thunb.) Nakai, *Fl. Sylv. Kor.* **16**: 34 (1927) to

which *Kalopanax ricinifolius* (Sieb. & Zucc.) Miq. and *K. septemlobus* (Thunb.) Koidz. are referable as synonyms.

Acer Mono is a very variable species; it varies considerably in the size, shape and lobing of the leaves and in the direction of the samaras which may be nearly horizontal to upright and connivent. As in other species of the genus, the extremes of these characters are connected by numerous intergrading forms, and the varieties and even species based on these characters are best considered as representing only forms, particularly as they do not show any clear geographical segregation.

From a taxonomic point of view it seems fortunate that the name *Acer pictum* generally applied to this species has become untenable on account of an earlier synonym, since it was based on a sterile branch with variegated leaves of a cultivated plant of which neither flowers nor fruits have ever been described. This fact makes it possible to adopt for the species the name *Acer Mono* which represents the most common and widely distributed form, while the form having a fruit with upright wings which has been considered by most authors the type of *A. pictum* is comparatively rare and occurs only in Japan.

Several new varieties have recently been described under *A. Mono* by Nakai, by Hara and by Hondo and several names transferred by the last-named author from *A. pictum* to *A. Mono*, but no transfer seems to have been made as yet of the three following forms or varieties.

***Acer Mono* f. *connivens* (Nichols.), comb. nov.**

Acer pictum Siebold & Zuccarini in Abh. Akad. Wiss. Muench. 4²: 156 (Fl. Jap. Fam. Nat. 1: 48) (1844), p. p. — Miquel in Ann. Mus. Bot. Lugd.-Bat. 2: 87 (Prol. Fl. Jap. 19) (1865) p. p. — K. Koch, Dendr. 1: 531 (1869), p. p. — Shirasawa, Ic. Ess. For. Jap. 1: t. 65, fig. 1-12 (1900). — Schneider, Ill. Handb. Laubholzk. 2: 225, fig. 150 e, 151 d-f (1907). — Rehder, Man. Cult. Trees Shrubs, 562 (1927). — Non *A. pictum* Thunb. (1783).

Acer pictum var. *connivens* Nicholson in Gard. Chron. II. 16: 375 (1881).

Acer pictum var. *eupictum* Pax in Bot. Jahrb. 7: 236 (1886).

Acer pictum was originally based on a sterile branch and Siebold & Zuccarini seem to have been the first authors to describe the fruit and they based their description on the form with upright wings which subsequently was adopted by most later authors as the type of *A. pictum*.

***Acer Mono* f. *marmoratum* (Nichols.), comb. nov.**

Acer pictum Thunberg, Fl. Jap. 162 (1784); Diss. de Acere (Rep. J. L. Aschan) 7. 1793 (Repr. in Diss. Acad. 2: 341. 1800 and in Misc. Papers Thunb. 293. 1935); Icon. Pl. Jap. 5: t. 3 (1805). — Willdenow, Sp. Pl. 4: 983 (1806). — Trattinick, Archiv. Gewächsk. 1: 3 t. 15

(1811). — Sprengel, Syst. 2: 224 (1825). — G. Don, Gen. Syst. 1: 65 (1832). — Loudon, Arb. Frut. Brit. 1: 432 (1838). — Non Thunb. (1783).

Acer pictum var. *marmoratum* Nicholson in Gard. Chron. II. 16: 375 (1881). — Bean, Trees Shrubs Brit. Isl. 1: 154 (1914). — Rehder, Man. Cult. Trees Shrubs, 562 (1927).

This form represents the type of *Acer pictum* Thunberg of 1784; all descriptions up to 1838 are based on the descriptions and illustration published by Thunberg. Siebold & Zuccarini in 1844 seem to have been the first to have published descriptions based on spontaneous material with flowers and fruits.

***Acer Mono* var. *tricuspis* (Rehd.), comb. nov.**

Acer tenellum Pax in Hooker Icon. Pl. 19: t. 1897 (1889); in Engler Pflanzenr. (Heft 8) IV. 163: 53, fig. 9 (1902). — **Synon. nov.**

Acer Bodinieri Lévillé in Repert. Spec. Nov. 10: 433 (1912); Fl. Kouy-Tchéou, 382 (1915).

Acer pictum var. *parviflorum* Schneid. f. *tricuspis* Rehder in Mitt. Deutsch. Dendr. Ges. 22: 258 (1913); in Jour. Arnold Arb. 15: 5 (1934); Man. Cult. Trees Shrubs, 562 (1927).

This variety differs from the type chiefly in the smaller 3-lobed leaves and the ciliate sepals, the smallest leaves being sometimes quite entire and ovate in outline. Ciliate sepals are also found in typical *A. Mono*, e. g. Wilson 1915 and 1919 from Hupeh, but in the Japanese specimen they seem to be always quite glabrous.

Acer Mono var. *tricuspis* seems to be restricted to Central China.

***Acer velutinum* Boissier, Diagn. Pl. Or. Nov. 6: 28 (1845) "Pl. Kotsch. Pers. Feb. 1845."**

Acer insigne Boissier & Buhse in Nouv. Mém. Soc. Nat. Moscou, 12: 46 (Aufzähl. Transkauk. Pers. Pfl.) (1860), quoad var. *a*.

Acer insigne var. *a. velutina* Boissier & Buhse, l. c. (1860).

Acer insigne var. *β. velutinum* Boissier, Fl. Or. 1: 948 (1867). — Pax in Bot. Jahrb. 7: 194 (1886); 16: 395 (1893); in Engler, Pflanzenr. IV. 163 (Heft 8): 15 (1902). — Wesmael in Bull. Soc. Bot. Belg. 29: 36 (1890). — Masters in Gard. Chron. III. 10: 189, fig. 24 (1891). — Schwerin in Gartenfl. 42: 268 (Var. *Acer*, 29) (1893). — Koehne, Deutsch. Dendr. 377 (1893). — Dippel, Handb. Laubholzk. 2: 430, fig. 202 (1893). — Rehder in Bailey, Cycl. Am. Hort. 1: 15 (1900); in Bailey, Stand. Cycl. Hort. 1: 201 (1914); Man. Cult. Trees Shrubs, 567 (1927). — Schneider, Ill. Handb. Laubholzk. 2: 203 (1907). — Henry in Elwes & Henry, Trees Gt. Brit. Irel. 3: 667 (1907). — Bean, Trees Shrubs Brit. Isles, 1: 144 (1914).

Acer insigne var. *typica* f. *velutina* Bornmüller in Bull. Herb. Boissier, II. 5: 643 (1905).

Boissier in 1860 referred *A. velutinum* as the typical variety to the

new species *A. insigne*, but in 1867 he reversed this status and made the glabrous form the type of *A. insigne* and var. *velutinum* a variety, a disposition followed by later authors. I agree with Bornmüller (l. c.) that these two varieties should be considered only forms being closely connected by intermediates which he found more common than the extremes.

***Acer velutinum* f. *longilobum* (Bornm.), comb. nov.**

Acer insigne var. *longiloba* Bornmüller in Bull. Herb. Boissier, II. 5: 643 (1905).

This is a rather striking form agreeing with the type in the pubescent under side of the leaves, but differing in three-lobed leaves with upright elongated narrow lobes, the middle lobe being about twice as long as broad and twice as long as the undivided portion of the leaf. This form is represented in this herbarium by an isotype of the only collection known. It seems to be an extreme form of the type.

***Acer velutinum* f. *glabrescens* (Boiss. & Buhse), comb. nov.**

Acer insigne Boiss. & Buhse var. β . *glabrescens* Boissier & Buhse in Nouv. Mém. Soc. Nat. Moscou, 12: 46 (Aufzähl. Transkauk. Pers. Pflanz.) (1860). — Pax in Bot. Jahrb. 7: 194 (1886). — Wesmael in Bull. Soc. Bot. Belg. 29: 36 (1890). — Rehder in Bailey, Cycl. Am. Hort. 1: 15 (1900); in Bailey, Stand. Cycl. Hort. 1: 201 (1914); Man. Cult. Trees Shrubs, 567 (1927). — Schneider, Ill. Handb. Laubholzk. 2: 203, fig. 126f, 132 a-d (1907).

Acer insigne Boissier & Buhse l. c. (1860), quoad var. *glabrescens*. — Boissier, Fl. Or. 1: 947 (1867). — Regel in Gartenfl. 30: 120, fig. (1881). — Dippel, Handb. Laubholzk. 2: 430, fig. 202 (1893). — Koehne, Deutsch. Dendr. 377 (1893), excl. syn. *A. Van Volxemi*. — Henry in Elwes & Henry, Trees Gt. Brit. Irel. 3: 667 (1907), quoad var. *glabrescens*.

Acer insigne var. *Van Volxemi* sensu Pax in Bot. Jahrb. 16: 395 (1893); in Engler, Pflanzenr. IV. 163 (Heft 8): 15 (1902). — Rehder in Bailey, Cycl. Am. Hort. 1: 15 (1900). — Quoad syn. var. *glabrescens*, non *A. Van Volxemi* Mast.

Acer insigne var. *Van Volxemi* (Mast.) Pax 2. *glabrescens* Pax ex Schwerin in Gartenfl. 42: 267 (Var. *Acer*, 29) (1893).

Acer insigne (?) β . *obtusiloba* Freyn & Sintenis in Bull. Herb. Boiss. II. 2: 843 (1902). — Bornmüller in Bull. Herb. Boiss. 5: 643 (1905).

As stated in my remarks under the type, I do not consider the glabrous and pubescent forms as entitled to varietal rank, since both forms are found in the same locality and intermediate forms are frequent between the type and the typical f. *glabrescens* which has the under side perfectly glabrous. *Acer insigne* var. *obtusiloba* Freyn & Sint. of which I have seen Bornmüller's no. 6532 referred by him to that variety, seems hardly

distinct from f. *glabrescens*; the lobes are rather shorter and more obtuse, but the leaves are otherwise indistinguishable from those of f. *glabrescens*.

Acer velutinum f. **Wolfii** (Schwerin), comb. nov.

Acer insigne *Wolfii* Schwerin in Mitt. Deutsch. Dendr. Ges. 14: 210 (1905). — Schneider, Ill. Handb. Laubholz. 2: 203 (1907) "f. *Wolfii*." — Rehder in Bailey, Stand. Cycl. Hort. 1: 201 (1914); Man. Cult. Trees Shrubs, 567 (1927), pro var.

This form differs from the preceding in the purplish red under side of the leaves, very much like *A. Pseudoplatanus* var. *purpureum* Loud.

Acer velutinum var. **Van Volxemii** (Mast.), comb. nov.

Acer Van Volxemii Masters in Gard. Chron. II. 7: 72, fig. 10 (1877). — Nicholson in Gard. Chron. II. 15: 10 (1881). — Dippel, Handb. Laubholz. 2: 432, fig. 203 (1893).

Acer Pseudo-Platanus subsp. *Van Volxemi* (Mast.) Wesmael in Bull. Soc. Bot. Belg. 29: 35 (1890).

Acer Volxemi Masters in Gard. Chron. III. 10: 9, fig. 1, 2 (1891). — Henry in Elwes & Henry, Trees Gt. Brit. Irel. 3: 660 (1908).

Acer insigne var. 1. *Van Volxemi* (Mast.) Pax in Bot. Jahrb. 16: 395 (1893); in Engler, Pflanzenr. IV. 163 (Heft 8): 15 (1902); excl. syn. var. *glabrescens*. — Rehder, Man. Cult. Trees Shrubs, 567 (1927).

Acer Kakheti Hort. Belg. ex Pax, l. c. (1893), pro synonym. precedentis.

Acer insigne var. *Van Volxemi* (Mast.) Pax 1. *perckense* Schwerin in Gartenfl. 42: 268 (Var. *Acer*, 29) (1893).

By several authors this maple has been united or confused with var. *glabrescens*, but Henry maintains that it is quite distinct, and he considers it a distinct species or possibly a hybrid between *A. insigne* and *A. Trautvetteri* Medw., but neither in the leaves nor in the inflorescence can I see any influence of the latter species. He states that it has extremely large leaves with white pubescence along the midrib beneath and twigs pubescent at the nodes and on the upper edge of the leaf-scars, and that the inflorescence has long bracts and bractlets like *A. Trautvetteri* Medw. I find, however, that the pubescence at the internodes is present also in the other varieties and the pubescence along the midrib of the leaves is found on plants intermediate between the type and the f. *glabrescens*. I have seen no flowering specimens of var. *Van Volxemi*, but judging from the illustration by Masters (l. c.) the inflorescence is quite different; it has the appearance of a dense semiglobose corymb instead of a pyramidal panicle, the bracts and bractlets are longer and more conspicuous, while in the other forms of *A. velutinum* they are minute and caducous, and the wings of the fruit spread nearly horizontally. The tree seems never to have been collected again in a wild

state and the original specimen upon which Masters based his description has apparently been lost.

***Acer brevilobum* Hesse, nom. nov.**

Acer brevilobum Hesse, Haupt-Preisverz. 1903-4, p. 80 (1903), nom. nud. — Kache in Mitt. Deutsch. Dendr. Ges. 28: 226 (1919), pro synon.

Acer parviflorum Franchet & Savatier, Enum. Fl. Jap. 2: 321, 323 (1879). — Maximowicz in Bull. Acad. Sci. St. Pétersb. 26: 439 (Mél. Biol. 10: 595) (1880). — Pax in Bot. Jahrb. 7: 247 (1886); in Engler, Pflanzenr. IV, 163 (Heft 8): 69 (1902). — Schneider, Ill. Handb. Laubholz. 2: 236, 1029, fig. 164 d (1907). — Shirasawa, Ic. Ess. For. Jap. 2: t. 42 (1908). — Koidzumi in Jour. Coll. Sci. Tokyo, 32, 1: 11, t. 1 (1911). — Silva-Tarouca, Uns. Freil.-Laubgeh. 131, fig. 113 (1913). — Kache in Mitt. Deutsch. Dendr. Ges. 28: 226 (1919). — Rehder, Man. Cult. Trees Shrubs, 569 (1927). — Non Ehrhardt (1789).

Acer pennsylvanicum subsp. 4. *parviflorum* Wesmael in Bull. Soc. Bot. Belg. 29: 62 (1890).

Acer crassipes Pax in Engler, Pflanzenr. IV. 163 (Heft 8): 69 (1902). — Hesse in Mitt. Deutsch. Dendr. Ges. 21: 358, fig. (1912). — Non Heer (1859).

Acer pictum var. *parviflorum* Schneider in Silva-Tarouca & Schneider, Uns. Freil.-Laubgeh. ed. 2, p. 85, fig. 73 (1922), quoad syn. *A. crassipes* et fig.

Acer parviflorum Franch. & Sav., the name up to the present time universally accepted for this species, is invalidated by the older homonym *A. parviflorum* Ehrh. which is a synonym of *A. spicatum*. *Acer crassipes* was based by Pax on material from the same plant as was *A. brevilobum*. This plant was growing in the nursery of A. H. Hesse in Weener, Germany, where I collected specimens in 1901 under the designation "A. spec. Japan" and in 1910 received flowering material named *A. crassipes* from Mr. Hesse. Mr. Hesse sent material to Schwerin and to Pax for identification; the former named it *A. brevilobum*, the name under which Hesse offered it in his catalogue in 1903 without author's citation, but Schwerin never published it, apparently because he identified it soon after with *A. parviflorum*. By Pax it was described in 1902 as a new species, *A. crassipes*, a name invalidated by the older homonym *A. crassipes* Heer (1859); it was first cited as a synonym of *A. parviflorum* in 1913 by Count Silva Tarouca (l. c.). Kache in 1919 cited both names, *A. crassipes* Pax and *A. brevilobum* Schwerin, as synonyms of *A. parviflorum*.

***Acer palmatum* Thunb. var. *palmatum* (Thunb.), comb. nov.**

Acer palmatum Thunberg in Nov. Act. Soc. Sci. Upsal. 4: 40 (1783); Fl. Jap. 162 (1784).

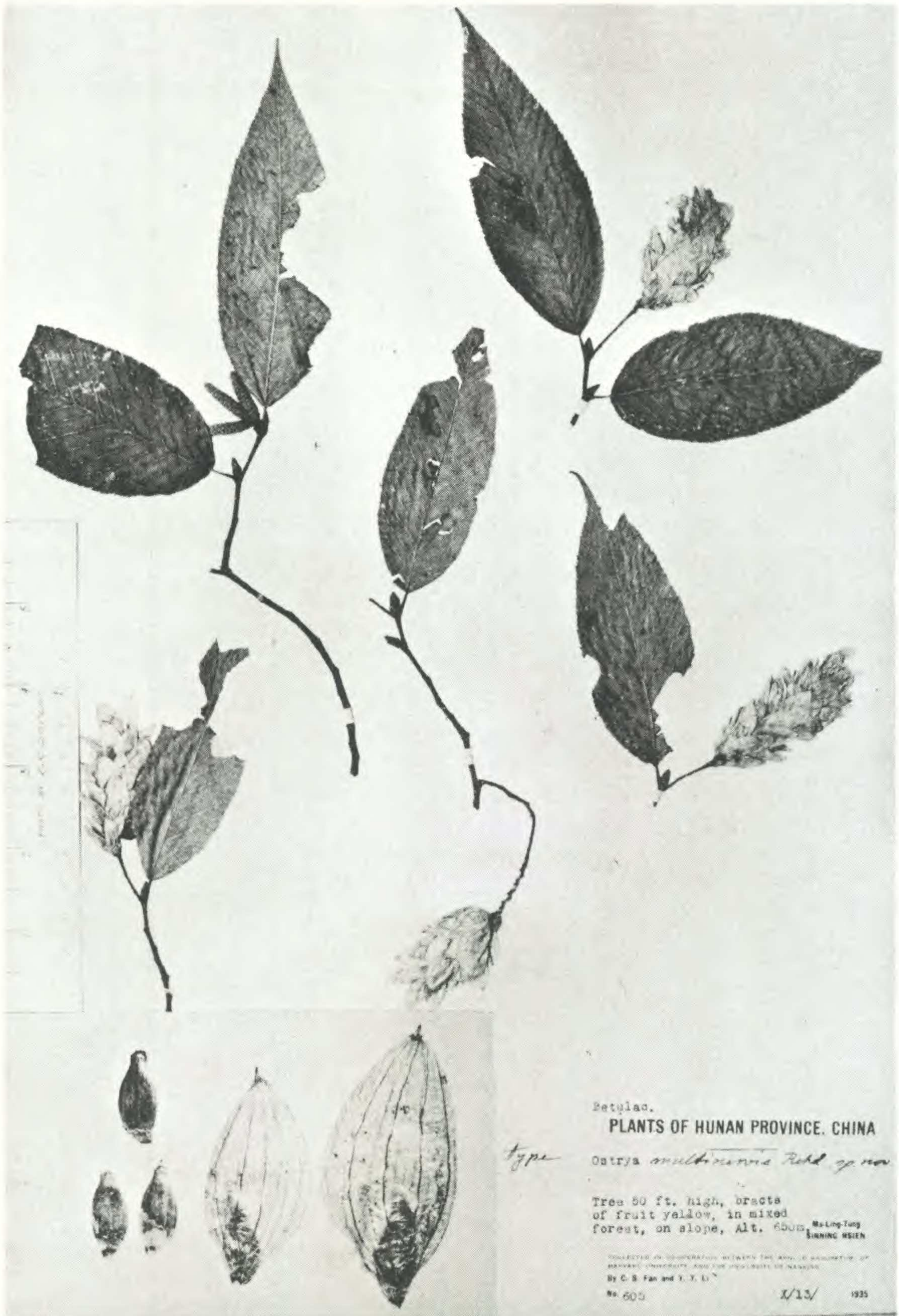
- Acer septemlobum* Siebold & Comp. in Jaarb. Nederl. Maatsch. Tuinb. 1844, p. 23, t. 2, fig. c., nom. seminud.¹
- Acer Meikets* Siebold & Comp. (l. c.) t. 2, fig. d., nom. seminud.
- Acer polymorphum* Sieb. & Zucc. γ . *palmatum* K. Koch, Hort. Dendr. 80 (1853).
- Acer palmatum* var. *quinquelobum* K. Koch in Ann. Mus. Bot. Lugd.-Bat. 1: 251 (1864). — Miquel in Arch. Néerland. 2: 469 (1867).
- Acer palmatum* var. *a. Thunbergii* Pax in Bot. Jahrb. 7: 202 (1886), pro parte. — Rehder, Man. Cult. Trees Shrubs, 570 (1927).
- Acer palmatum* var. *Thunbergii* Pax subvar. *eupalmatum* 1. *normale* Schwerin in Gartenfl. 42: 652, fig. (1893). — Pax in Engler, Pflanzenr. IV. 163 (Heft 8): 26 (1902). — Schneider, Ill. Handb. Laubholzk. 2: 207, fig. 135a (1907).
- Acer palmatum* var. *septemloba* Miquel in Ann. Mus. Bot. Lugd.-Bat. 2: 88 (Prol. Fl. Jap. 20) (1865), based on *A. Meikets* in Jaarb. Nederl. Maatsch. Tuinb. tab. 2, fig. d.
- Acer palmatum* f. *genuina* Miquel in Siebold & Zuccarini, Fl. Jap. 2: 84 (1870), quoad nomen, excl. syn. descr. et planta depicta.
- Acer palmatum* "*palmatum* proper" Nicholson in Gard. Chron. n. ser. 16: 137 (1881).
- Acer palmatum* subsp. *genuinum* (S. & Z.) Koidzumi in Jour. Coll. Sci. Tokyo, 32, 1: 44, t. 26, fig. 1-6 (1911).

The oldest varietal epithet for typical *Acer palmatum* is apparently Koch's *A. polymorphum* γ . *palmatum* of 1853. The varietal epithet *Thunbergii* proposed by Pax in 1886, and used by many later authors is antedated not only by that of 1853, but also by *A. palmatum* β *quinquelobum* K. Koch of 1864.

***Acer palmatum* Thunb. var. *heptalobum*, nom. nov.**

- Acer polymorphum* δ . *septemlobum* sensu K. Koch, Hort. Dendr. 80 (1853) non *A. septemlobum* Thunb. — Anon. in Bull. Féd. Hort. Soc. Belg. 1883-85, p. 358 (1887).
- Acer septemlobum* sensu K. Koch, Hort. Dendr. 80 (1853), non Thunberg; pro synonym. praecedentis.
- Acer palmatum* forma *genuina* Miquel in Siebold & Zuccarini, Fl. Jap. 2: 84, t. 145 (1870), pro parte, quoad plantam depictam et syn. *A. septemlobum* sensu Miquel, non Thunberg.
- Acer palmatum* var. *Thunbergii* subvar. *septemlobum* 17. *euseptemlobum* Schwerin in Gartenfl. 42: 678, fig. (1893). — Pax in Engler Pflanzenr. IV. 163 (Heft 8): 26 (1902), sphalmate "*subseptemlobum*". — Schneider, Ill. Handb. Laubholzk. 2: 207, fig. 135b (1907).
- Acer palmatum* var. *septemlobum* Nicholson in Gard. Chron. n. ser. 16: 137 (1881). — Rehder in Bailey, Cycl. Am. Hort. 1: 14 (1900); Man. Cult. Trees Shrubs, 570 (1927).
- Acer palmatum* b. *A. septemlobum* K. Koch, Dendr. 1: 525 (1869).
- Acer palmatum* subsp. *septemlobum* Koidzumi in Jour. Coll. Sci. Tokyo, 32, 1: 46, t. 26, fig. 7, 8, t. 27 (1911).

¹This and the following represent forms belonging to typical *A. palmatum* as the lobulate and coarsely and unequally serrate lobes show.



OSTRYA MULTINERVIS Rehder